



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*AK*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/678,163 10/02/00 KLINE

J 1303-1008

EXAMINER

MM91/1017

LAWRENCE R YOUST  
SMITH DANAMRAJ & YOUST PC  
12900 PRESTON ROAD  
SUITE LB 15  
DALLAS TX 75230-1328

LEE, H

ART UNIT

PAPER NUMBER

2823

DATE MAILED:

10/17/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	<b>Application No.</b> 09/678,163	<b>Applicant(s)</b> KLINE, JERRY D.	
	<b>Examiner</b> Hsien-Ming Lee	<b>Art Unit</b> 2823	
	-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --		

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-41 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-41 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All   b) ☐ Some \*   c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
---	---

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 16 in fig. 3A and 36 in fig.3B. Correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lam ( US 6,281,046 ) in view of the admitted prior art in the instant invention ( pp. 2-4 ).

Lam teaches the claimed method comprising the steps of :

- electrically and mechanically coupling a semiconductor wafer 21 having a plurality of integrated circuit chips 25 to an interposer 31 to form a wafer-interposer assembly 39 ( figs. 1, 5, 6; col. 4, lines 61-62; col. 5, lines 13-19 );
- testing the integrated circuit chips 25 of the semiconductor wafer 21 ( col. 5, lines 19-20 ); and
- dicing the wafer-interposer assembly 39 into a plurality of chip assemblies ( col. 5, line 24-26 ).

Lam does not expressly teach selecting at least two of the chip assemblies for inclusion in the matched set based upon the testing.

The admitted prior art, however, teaches that each chip has been tested prior to inclusion in the matched set ( page 3, second paragraph of the specification ).

Therefore, it would have been obvious to the ordinary skilled art in the art to recognize that it is a necessary step for completing the claimed selecting method by selecting chip assemblies for inclusion in the matched set after said testing step.

Regarding to claims 2-6, Lam does not expressly the purposes of testing. The admitted prior art, however, teaches that in order to improve overall electronic device performance a matched set is used and the testing is carried out, wherein the testing step includes testing chips together to identify which groups of chips perform best together for inclusion ( page 2, last paragraph through page 3, line 1 ); testing chip compatibility; testing chips over a range of temperature ( page 3, second paragraph ); and the IC chips of the semiconductor wafer can be RF devices ( page 3, second paragraph ).

Therefore, it would have been obvious to the ordinary skilled art in the art to include the testing items as taught by the admitted prior art in Lam's method in order to improve the device performance.


Regarding to claims 7-13 and 24-30, it would have been obvious to the ordinary skilled in the art to appreciate that they are routine check items during the testing step.

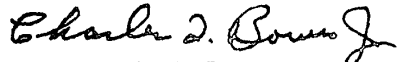
Regarding to a matched set as recited in claim 36, Lam' method also inherently teaches the claimed matched set, which includes a substrate onto which two chip assemblies are electrically coupled ( figs. 1, 5, 6 and related text ).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hsien-Ming Lee whose telephone number is 703-305-7341. The examiner can normally be reached on M-F (7:00 ~ 4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 703-308-4918. The fax phone numbers for the organization where this application or proceeding is assigned is 703-305-0142.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Hsien Ming Lee  
October 15, 2001

  
Charles Bowers  
Supervisory Patent Examiner  
Technology Center 2800